AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF CLAIMS:

1-7. (cancelled)

8. (currently amended) An information recording and reproduction apparatus which records and reproduces information by irradiating a laser light onto a recording medium, comprising:

a light source which emits the laser light;

a driving signal generating unit which generates a laser driving signal having a recording power level corresponding to recording data or a reproduction power level;

a high frequency superimposing unit which superimposes a high frequency signal on the laser driving signal; and

a control unit which drives the light source by the laser driving signal on which the high frequency signal is superimposed to perform recording and reproduction,

wherein a level of the high frequency signal at a time of recording is different from the level of the high frequency signal at a time of reproduction, and

wherein the high frequency superimposing unit changes the level of the high frequency signal at the time of the reproduction to the level of the high frequency signal at the

time of recording at a timing a predetermined time period before transition of the control unit from a reproduction state to a recording state.

9. (currently amended) The information recording and reproduction apparatus according to claim ~~1~~ 8, wherein the level of the high frequency signal at the time of the recording is smaller than the level of the high frequency signal at the time of the reproduction.

10. (currently amended) The information recording and reproduction apparatus according to claim 8, wherein the level of the high frequency signal at the time of the reproduction is equal to or larger than 5mWpp when the recording medium is a DVD, and the level of the high frequency signal at the time of the recording is equal to or smaller than 4mWpp when the recording medium is a DVD±R/RW ~~DVD}R/RW~~.

11. (previously presented) The information recording and reproduction apparatus according to claim 8, wherein the predetermined time period is longer than a time period necessary for a transient response of a waveform of the laser light by change of the level of the high frequency signal to stabilize.

12. (currently amended) An information recording and reproduction method which records and reproduces information by irradiating a laser light onto a recording medium, comprising:

a driving signal generating process which generates a laser driving signal having a recording power level corresponding to recording data or a reproduction power level;

a high frequency superimposing process which superimposes a high frequency signal on the laser driving signal; and

a control process which drives a light source by the laser driving signal on which the high frequency signal is superimposed to perform recording and reproduction,

wherein a level of the high frequency signal at a time of recording is different from the level of the high frequency signal at a time of reproduction, and

wherein the high frequency superimposing process changes the level of the high frequency signal at the time of the reproduction to the level of the high frequency signal at the time of recording at a timing a predetermined time period before transition of the control process from a reproduction state to a recording state.

13. (currently amended) A computer program product in a computer-readable medium executed in an information recording and reproduction apparatus to record and reproduce information by

irradiating a laser light onto a recording medium, making the information recording and reproduction apparatus function as:

a driving signal generating unit which generates a laser driving signal having a recording power level corresponding to recording data or a reproduction power level;

a high frequency superimposing unit which superimposes a high frequency signal on the laser driving signal; and

a control unit which drives a light source by the laser driving signal on which the high frequency signal is superimposed to perform recording and reproduction,

wherein a level of the high frequency signal at a time of recording is different from the level of the high frequency signal at a time of reproduction, and

wherein the high frequency superimposing unit changes the level of the high frequency signal at the time of the reproduction to the level of the high frequency signal at the time of recording at a timing a predetermined time period before transition of the control unit from a reproduction state to a recording state.